

**ABSTRACT OF THE DISCLOSURE**

In an implantable pacemaker, pacing pulses are delivered to a ventricle in a P-wave synchronous mode as long as no atrial arrhythmia is detected, 5 pacing pulses and a mode switch is made to deliver pacing pulses to the ventricle in a non-P-wave synchronous mode if atrial arrhythmia is detected. From an impedance signal measured in the atrium, atrial distention is determined and, in the non-P-wave synchronous mode, the delivery rate of the pacing pulses is increased to decrease the atrial distention during atrial arrhythmia.

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